

ABSTRACT

The invention regards joint construction implements and method for their use in the construction of surface pavement (e.g., concrete or asphalt pavement for roads, highways, airports and parking lots). The basic element is a trapezoidal shaped reinforcing concrete beam (RCB) or a modified reinforcing concrete beam (MRCB) placed along the entire length of the joint and not bounded to either part of the slab.

This solution has the following features:

- The beam can be pre-cast or cast in place at the construction site.
- The beams support both edges along the entire length of the joint and avoid the need of dowel bars.
- The water stops built in on both sides of the beam make the beam fully waterproof.
- The large base of the beam distributes the load on large area, which leads to decreasing pressure on the base and reduced deformation on the base.

The beams divide the width of pavement into strips. Every strip can then be filled independently using smaller-sized paving machines (e.g., roller screeds and vibro screeds).